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Roundup

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Development of International Space Station to continue during STS-101

The development of the International Space Station will continue during NASA's second shuttle flight of the year when *Atlantis* is launched on the STS-101 mission, the 98th flight in Space Shuttle Program history.

"Our goal for STS-101, first and foremost, is to restore the operational and functional redundancy to the components of the space station that we have on orbit," said Phil Engelauf, STS-101 lead flight director.

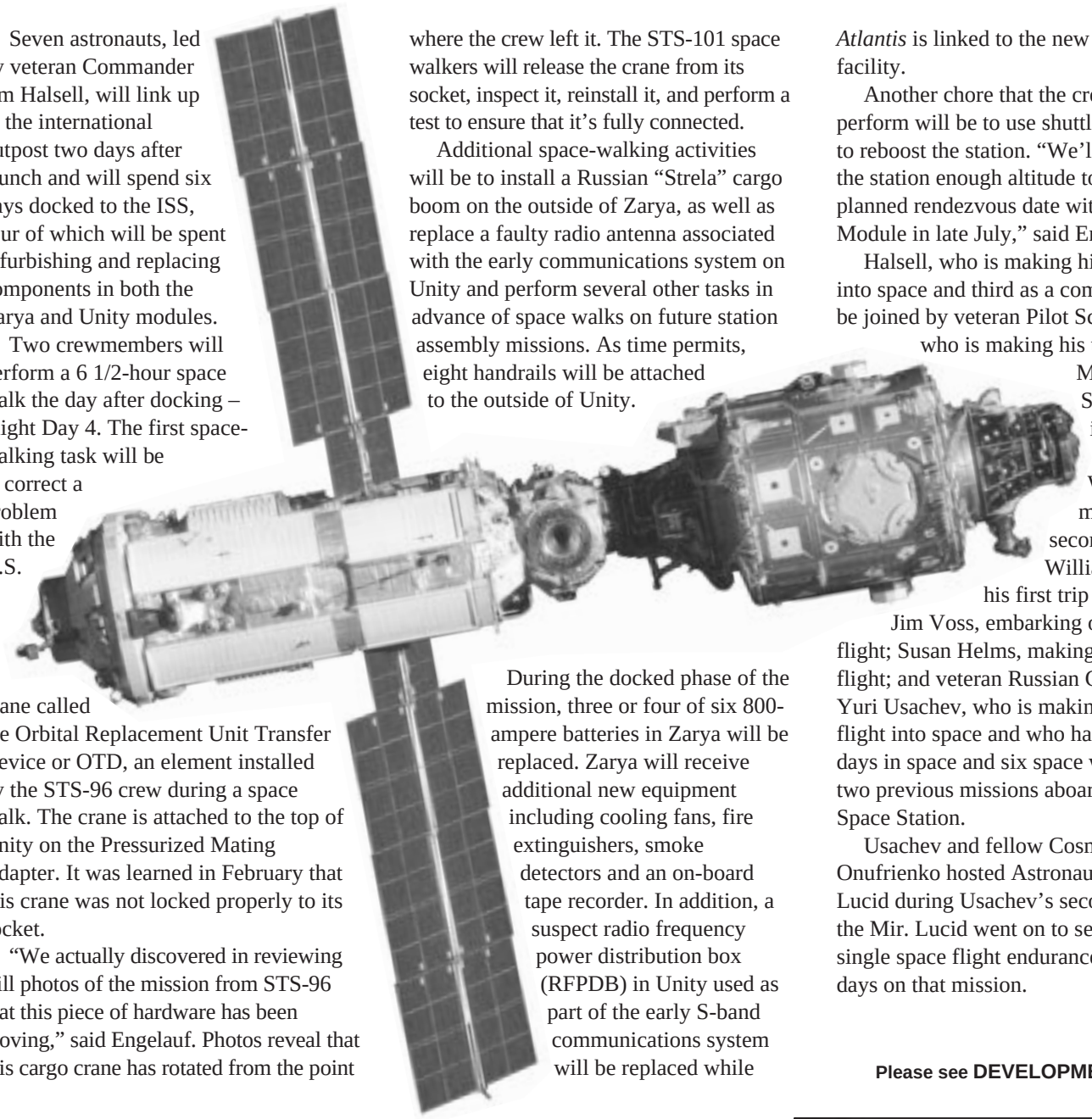
Outfitted with a new "glass cockpit" and other state-of-the-art upgrades to key systems during an extensive modification period in Palmdale, California, *Atlantis* is scheduled to be launched from Complex 39-A at the Kennedy Space Center April 24 at the start of a 5-minute window. The precise launch time and duration of the launch opportunity will be narrowed within a week before the start of the mission to provide the best time for *Atlantis* to begin its two-day chase to catch up to the ISS.

Atlantis last flew in space in support of the STS-86 mission in 1997. With the "glass cockpit" upgrade, the electro-mechanical displays and instrumentation systems on board the vehicle were replaced with a complete, digitally-driven color panel. Similar to systems common in commercial airliners, the "glass cockpit" weighs less and has greater capabilities. All of the space shuttles will be upgraded with the "glass cockpit" by 2002, enabling future upgrades to a "smart cockpit."

Seven astronauts, led by veteran Commander Jim Halsell, will link up to the international outpost two days after launch and will spend six days docked to the ISS, four of which will be spent refurbishing and replacing components in both the Zarya and Unity modules.

Two crewmembers will perform a 6 1/2-hour space walk the day after docking – Flight Day 4. The first space-walking task will be to correct a problem with the U.S. crane called the Orbital Replacement Unit Transfer Device or OTD, an element installed by the STS-96 crew during a space walk. The crane is attached to the top of Unity on the Pressurized Mating Adapter. It was learned in February that this crane was not locked properly to its socket.

"We actually discovered in reviewing still photos of the mission from STS-96 that this piece of hardware has been moving," said Engelauf. Photos reveal that this cargo crane has rotated from the point where the crew left it. The STS-101 space walkers will release the crane from its socket, inspect it, reinstall it, and perform a test to ensure that it's fully connected.



Additional space-walking activities will be to install a Russian "Strela" cargo boom on the outside of Zarya, as well as replace a faulty radio antenna associated with the early communications system on Unity and perform several other tasks in advance of space walks on future station assembly missions. As time permits, eight handrails will be attached to the outside of Unity.

During the docked phase of the mission, three or four of six 800-ampere batteries in Zarya will be replaced. Zarya will receive additional new equipment including cooling fans, fire extinguishers, smoke detectors and an on-board tape recorder. In addition, a suspect radio frequency power distribution box (RFPDB) in Unity used as part of the early S-band communications system will be replaced while *Atlantis* is linked to the new international facility.

Another chore that the crew will perform will be to use shuttle propellants to reboost the station. "We'll try to give the station enough altitude to support the planned rendezvous date with the Service Module in late July," said Engelauf.

Halsell, who is making his fifth flight into space and third as a commander, will be joined by veteran Pilot Scott Horowitz, who is making his third flight. Mission Specialists include Dr. Mary Ellen Weber, making her second flight; Jeff Williams, making his first trip into space; Jim Voss, embarking on his fourth flight; Susan Helms, making her fourth flight; and veteran Russian Cosmonaut Yuri Usachev, who is making his third flight into space and who has logged 376 days in space and six space walks during two previous missions aboard the Mir Space Station.

Usachev and fellow Cosmonaut Yuri Onufrienko hosted Astronaut Shannon Lucid during Usachev's second flight on the Mir. Lucid went on to set a U.S. single space flight endurance mark of 188 days on that mission.

Please see DEVELOPMENT on Page 2

Parsons named JSC deputy director

William Parsons has been named deputy director of the Johnson Space Center. He previously served as director of Center Operations for JSC, a position he held since 1999.

Parsons' appointment by JSC Director George Abbey took effect March 6. In his new position, he will share responsibility for managing the overall activities of the center.

"During the next few years, the Johnson Space Center will be extremely busy completing assembly of the International Space Station and preparing the first crews of astronauts for their tours on board," said Parsons. "I look forward to assisting JSC Director George Abbey with the myriad of responsibilities needed to achieve the goals of the center."

Parsons joined NASA at the Kennedy Space Center in 1990 where he held progressively responsible positions including serving as 2A manager of the Space Station Hardware Integration Office. In 1997, he was selected as the engineering division chief in the Propulsion Test Directorate at the Stennis Space Center. He later served as the operations division chief in the Propulsion Test Directorate until he joined JSC as deputy director, Center Operations, in 1998.

Parsons holds a bachelor's degree in engineering from the University of Mississippi and a master's degree in engineering management from the University of Central Florida. ■

William Parsons

Scientist studies Yukon meteorite fragment.

Page 2

JASON XI focus is on extreme challenges.

Page 3

Students soar psychologically and scientifically.

Pages 4-5